Perceived Usefulness of Decision Support: The StrokeNet Experience

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Background. Clinical decision support (CDS) systems can have great benefits for quality, especially when used by physicians at the point of care. To encourage CDS use, physicians need to be introduced to decision support as early in their training as possible.

The purpose of our study was to evaluate the perceived usefulness of a CDS among residents at The Toronto Hospital (TTH) who were seeing a decision support system for the first time. Using a written survey model, we asked residents to rank the usefulness of the StrokeNet decision support system according to several key indicators.

System. StrokeNet is a guided order entry system that assists clinicians in their choice of diagnostic and therapeutic options for acute stroke patients. The system was developed by a University of Alberta consortium (Synapse Publishing), with input from leading stroke physicians across Canada. In addition to providing order entry guidance, the CDS provides clinicians with on-line access to the evidence behind the diagnostic and therapeutic decisions. For example, research studies and drug protocol information can be accessed through StrokeNet.

A pilot project was established to confirm the applicability of StrokeNet in the TTH setting, and to review any process flows that would need to change to accommodate the new software.

Evaluation. Three resident teams, one from neurology and two from internal medicine (n=15) were selected for participation in the pilot project. Pilot participation included being trained on StrokeNet, taking the survey, and agreeing to use the system for all stroke patients for three months.

The survey asked the residents to rate the system on a number of indicators using a five point Likert Scale, see Figure 1 for a list of indicators.

Figure 1

List of Indicators

- provided an organized approach to stroke management
- accelerated the investigation and treatment of stroke patients
- assisted with the determination of an etiological stroke diagnosis
- provided prognostic information
- monitored the time since stroke onset
- assisted with selecting appropriate diagnostic tests
- flagged treatment contraindications or hazards
- provided the evidence for selecting tests or interventions
- suggested appropriate interventions (medications, surgery)
- provided a link with the Internet
- promoted education about stroke management
- assisted in completing the physician's orders
- assisted in preparing discharge summaries
- demonstrated outcome measure scales

Conclusions. Survey results indicated that residents thought StrokeNet would be most useful in diagnosing a stroke and choosing appropriate diagnostic tests. Respondents agreed that the software will bring treatment contraindications and hazards to their attention. Other useful features noted by residents include StrokeNet's capability to prepare discharge summaries and its use of standardized outcome measure scales for stroke severity.

Some respondents were unsure whether StrokeNet accelerated the investigation and treatment of stroke patients. Other concerns related to logistical issues such as password/login and availability of terminals.

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